

Patent Abstracts of Japan

PUBLICATION NUMBER : 11060390
PUBLICATION DATE : 02-03-99

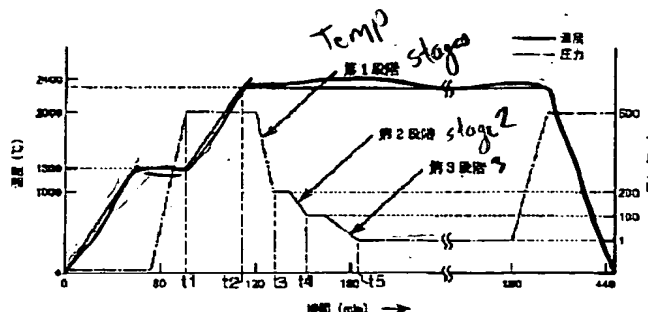
APPLICATION DATE : 07-08-97
APPLICATION NUMBER : 09213546

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INT.CL. : C30B 29/36 C30B 23/02 C30B 27/00
H01L 21/205 // H01L 33/00

TITLE : PRODUCTION OF SILICON CARBIDE
SINGLE CRYSTAL



ABSTRACT : PROBLEM TO BE SOLVED: To provide a method to easily produce a silicon carbide single crystal with a uniform crystal form and crystal planes and good quality.

SOLUTION: A silicon carbide source powder heated at 2200 to 2300°C is deposited on a silicon carbide single crystal substrate at a temp. lower than the temp. of the silicon carbide source powder by 50 to 100°C, and then the pressure of an inert gas atmosphere is reduced in two or more plural steps. The reduction of pressure is controlled in such a manner that the pressure ranges 200 to 500 Torr in the first step, 100 to 200 Torr in the second step and 1 to 10 Torr in the third step, and moreover, that the pressure is slowly reduced for ≥ 10 min from the starting of pressure reduction of the inert gas atmosphere to the pressure to grow the crystal. Thereby, the initial growing rate of the crystal growth is controlled, and a high-quality silicon carbide single crystal with a uniform crystal shape and crystal planes is grown along the lattices of a good quality silicon carbide single crystal.

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